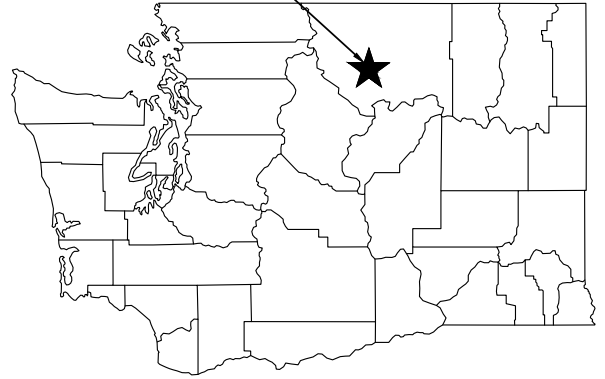


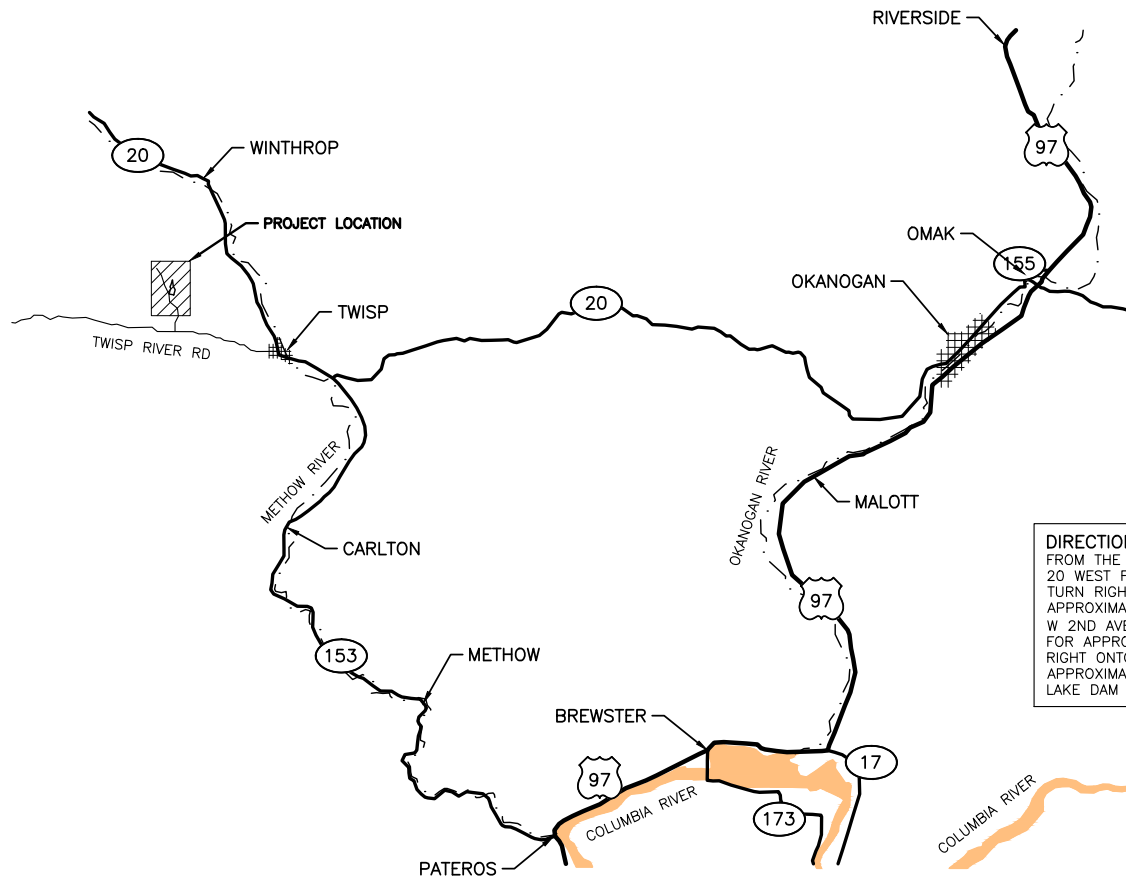


METHOW WILDLIFE AREA
PROJECT LOCATION



STATE MAP

NOT TO SCALE



DIRECTIONS

FROM THE CITY OF OKANOGAN TAKE HWY 20 WEST FOR APPROXIMATELY 28 MILES. TURN RIGHT AND STAY ON HWY 20 FOR APPROXIMATELY 2.5 MILES. TURN LEFT ON W 2ND AVE / TWISP RIVER RD. CONTINUE FOR APPROXIMATELY 2.3 MILES. TURN RIGHT ONTO FROST RD. CONTINUE APPROXIMATELY 1.3 MILES TO MILLES LAKE DAM ON THE RIGHT.

VICINITY MAP

NOT TO SCALE

ENG. PROJECT NO. ON:R73:2021-1

PORTION OF: S2, T33N, R21E, W.M.

DRAWN BY: S. GOODWIN

REFERENCE NUMBER:

APPLICANT:

WASHINGTON DEPT. of FISH & WILDLIFE
600 CAPITOL WAY N.
OLYMPIA, WA 98501-1091

ADJACENT PROPERTY OWNER:

- 1. PRIVATE
- 2. PRIVATE

PROJECT LOCATION (ADDRESS):

MILLES LAKE DAM
FROST ROAD
TWISP, WA

LAT/LONG: 48.392178, -120.1841167

DATUM: NAD 83/11, NAVD 88

SHEET 1 OF 9 DATE: 12/22/2021

PROPOSED PROJECT:

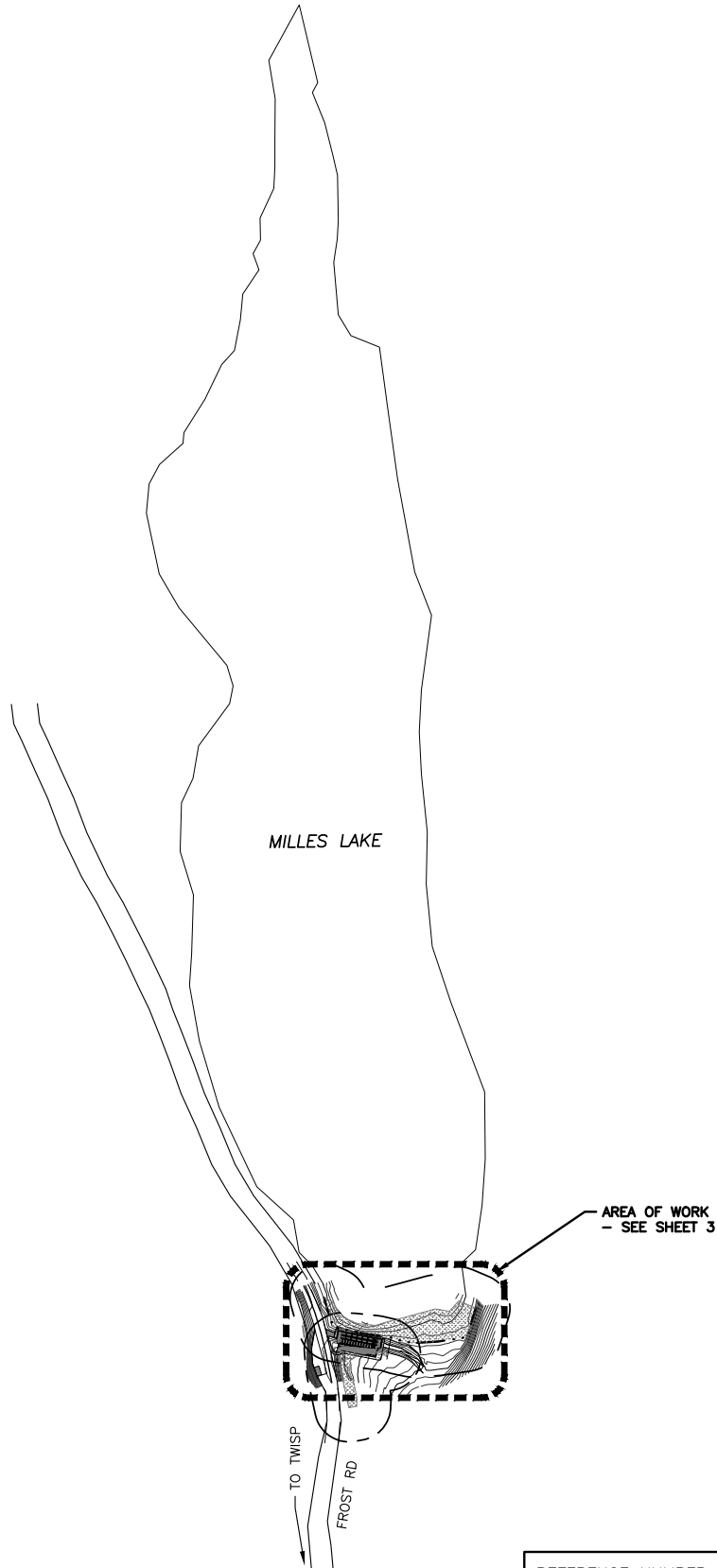
METHOW WLA - BIG BEND UNIT
MILLES LAKE DAM
DAM SAFETY REPAIRS

IN: MILLES LAKE

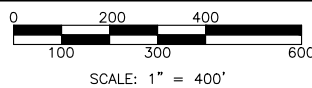
NEAR/AT: TWISP

COUNTY: OKANOGAN

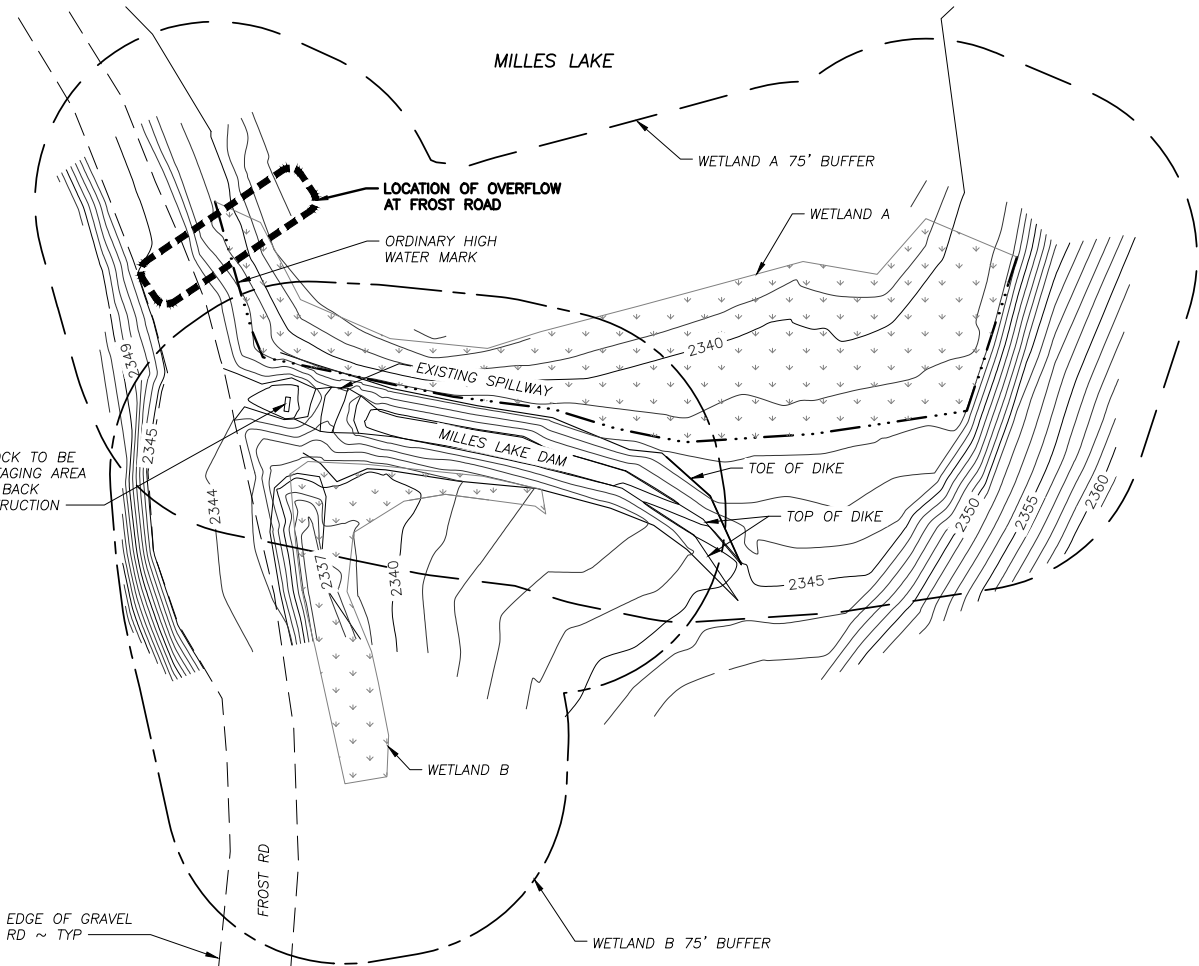
STATE: WA



OVERALL SITE PLAN

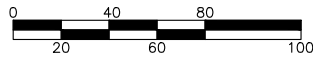


REFERENCE NUMBER: -----
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE
PROPOSED PROJECT:
DAM SAFETY REPAIRS
LOCATION: MILLES LAKE DAM
SHEET 2 OF 9 DATE: 12/22/2021



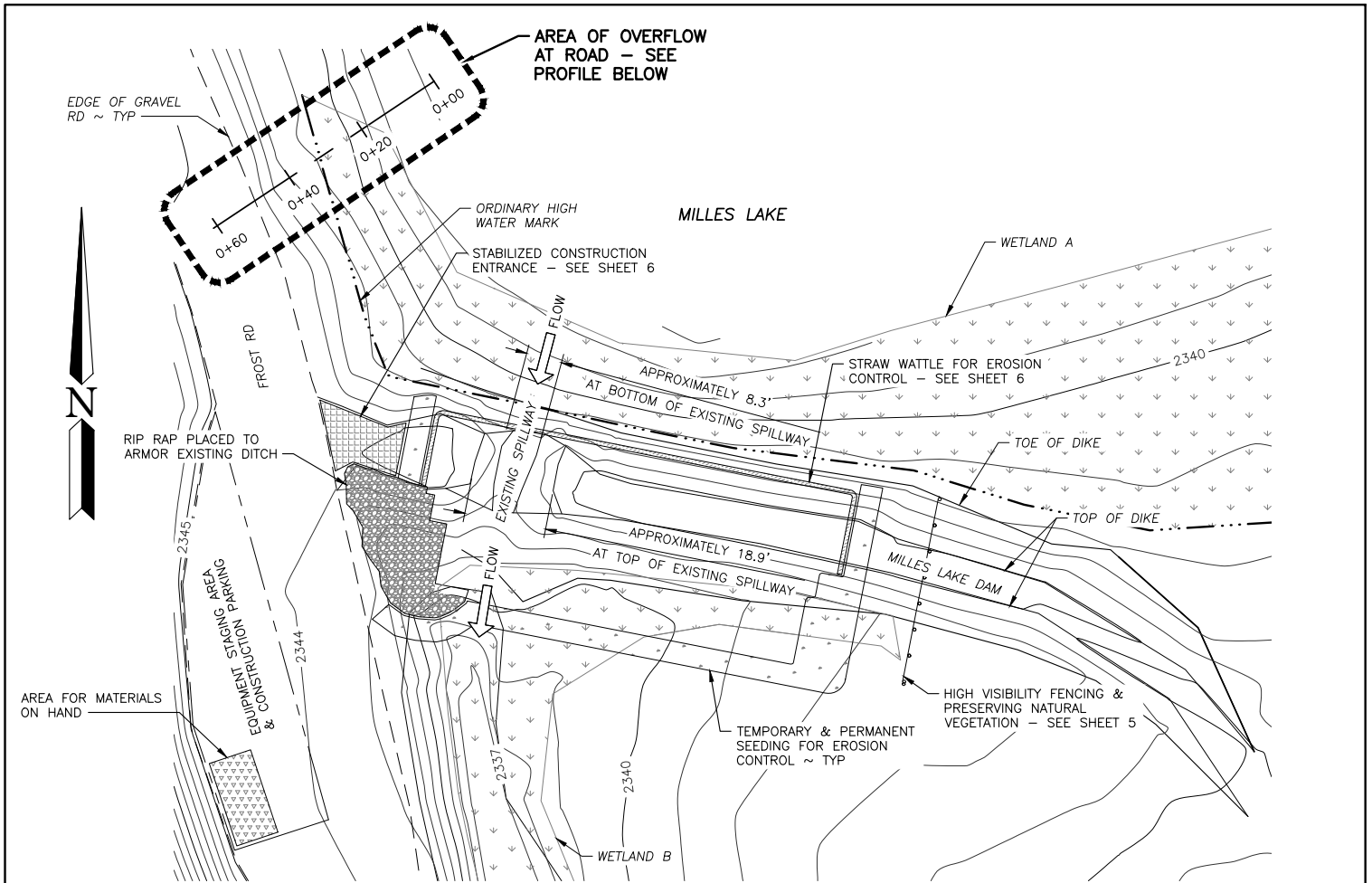
EXISTING SITE PLAN

NOTE: WATER IS OVERWHELMING CURRENT SPILLWAY AND OVERFLOWING AT FROST LAKE ROAD

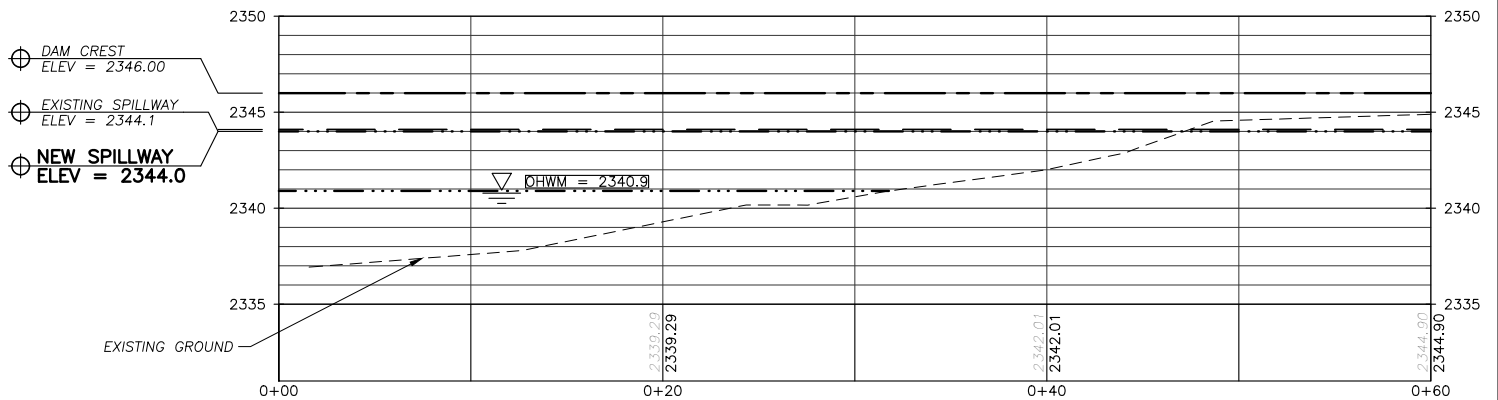
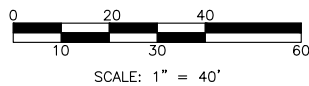


SCALE: 1" = 80'

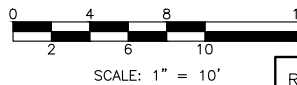
REFERENCE NUMBER: -----
APPLICANT NAME:
WASHINGTON DEPT. of FISH & WILDLIFE
PROPOSED PROJECT:
DAM SAFETY REPAIRS
LOCATION: MILLES LAKE DAM
SHEET 3 OF 9 DATE: 12/22/2021



EROSION CONTROL

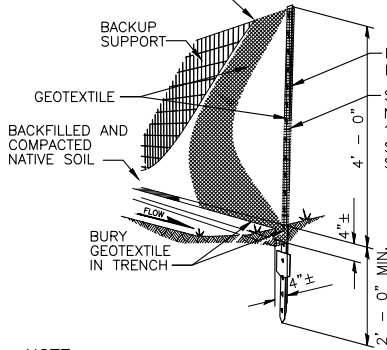


PROFILE AT ROAD OVERFLOW



REFERENCE NUMBER: -----
 APPLICANT NAME:
 WASHINGTON DEPT. of FISH & WILDLIFE
 PROPOSED PROJECT:
 DAM SAFETY REPAIRS
 LOCATION: MILLES LAKE DAM
 SHEET 4 OF 9 DATE: 12/22/2021

ATTACH IN A MANNER THAT ASSURES FABRIC IS FIRMLY HELD BY THE BACKUP SUPPORT IN A WAY THAT REDUCES THE POTENTIAL FOR FABRIC TEARING



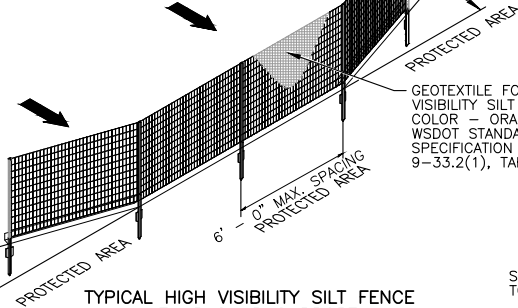
NOTE:

DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENT-RATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.

TYPICAL INSTALLATION DETAIL

FASTEN GEOTEXTILE TO POST EVERY 6" O.C.
 SELF-LOCKING TIE, NYLON 5/8 (MIN GRAD), 120# MIN TENSILE STRENGTH, UV STABILIZED

SHEET FLOW (TYPICAL)



TYPICAL HIGH VISIBILITY SILT FENCE WITH BACKUP SUPPORT ISOMETRIC

INSTALL BACKUP SUPPORT FOR THE GEOTEXTILE, SEE WSDOT STANDARD SPECIFICATION SECTION 8.01.3(9)A SEE NOTE 1

GEOTEXTILE FOR HIGH VISIBILITY SILT FENCE COLOR - ORANGE~ SEE WSDOT STANDARD SPECIFICATION SECTION 9-33.2(1), TABLE 6

POST ~ WOOD OR STEEL (TYPICAL)

BACKUP SUPPORT (TYPICAL)

FABRIC (GEOTEXTILE) (TYPICAL)

SPliced FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.

SPlice DETAIL

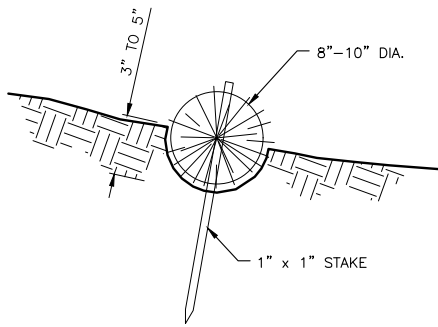
NOTE:

1. INSTALL THE ENDS OF THE HIGH VISIBILITY SILT FENCE TO POINT SLIGHTLY UPSLOPE TO PREVENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.
2. PERFORM MAINTENANCE IN ACCORDANCE WITH WSDOT STD SPECIFICATION 8-01.3(9)A AND 8-01.3(15).
3. SPLICES SHALL NEVER BE PLACED IN LOW SPOTS OR SUMP LOCATIONS. IF SPLICES ARE LOCATED IN LOW OR SUMP AREAS, THE FENCE MAY NEED TO BE REINSTALLED UNLESS THE PROJECT ENGINEER APPROVES THE INSTALLATION.
4. INSTALL SILT FENCING PARALLEL TO MAPPED CONTOUR LINES.

HIGH VISIBILITY FENCE WITH BACKUP SUPPORT

SCALE: NOT TO SCALE

REFERENCE NUMBER: -----
 APPLICANT NAME:
 WASHINGTON DEPT. of FISH & WILDLIFE
 PROPOSED PROJECT:
 DAM SAFETY REPAIRS
 LOCATION: MILLES LAKE DAM
 SHEET 5 OF 9 DATE: 12/22/2021

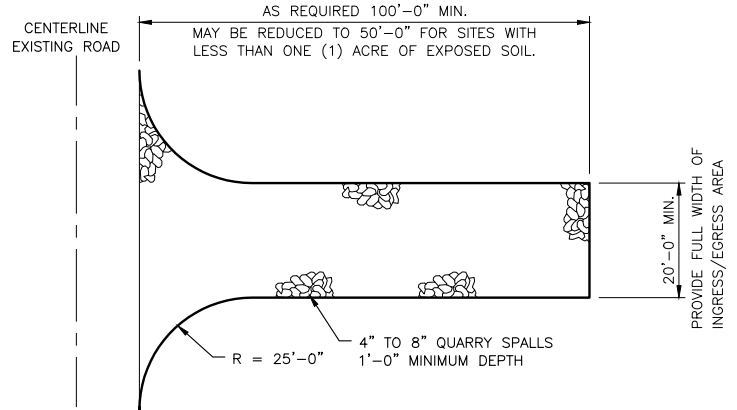


STRAW WATTLE DETAIL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS:

1. PREPARE THE SLOPE BEFORE THE WATTLING PROCEDURE IS STARTED.
2. SMOOTH SHALLOW GULLIES AS WORK PROGRESSES.
3. DIG SMALL TRENCHES ACROSS THE SLOPE ON CONTOUR, TO PLACE ROLLS IN. THE TRENCH SHOULD BE DEEP ENOUGH TO ACCOMMODATE HALF THE THICKNESS OF THE ROLL. WHEN THE SOIL IS LOOSE AND UNCOMPACTED, THE TRENCH SHOULD BE DEEP ENOUGH TO BURY THE ROLL 2/3 OF ITS THICKNESS BECAUSE THE GROUND WILL SETTLE.
4. ROLLS SHALL BE INSTALLED PERPENDICULAR TO WATER MOVEMENT, PARALLEL TO THE SLOPE CONTOUR.
5. BUILD TRENCHES AND INSTALL ROLLS FROM THE BOTTOM OF THE SLOPE AND WORK UP.
6. CONSTRUCT TRENCHES AT CONTOUR INTERVALS 3-12 FEET APART DEPENDING ON STEEPNESS OF SLOPE. THE STEEPER THE SLOPE, THE CLOSER TOGETHER THE TRENCHES. 1:1=10' 2:1=20' 3:1=30' 4:1=40'
7. LAY THE ROLL ALONG THE TRENCHES FITTING IT SNUGLY AGAINST THE SOIL. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE STRAW WATTLE.
8. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE WATTLE AND INTO THE SOIL FOR THE WILLOW OR WOODEN STAKES.
9. DRIVE THE STAKE THROUGH PREPARED HOLE INTO SOIL. LEAVE ONLY 1 OR 2 INCHES OF STAKE EXPOSED ABOVE ROLL.
10. IF USING WILLOW STAKES REFER TO LIVE STAKING BEST MANAGEMENT PRACTICES.
11. INSTALL STAKES AT LEAST EVERY 4 FEET APART THROUGH THE WATTLE. ADDITIONAL STAKES MAY BE DRIVEN ON THE DOWNSLOPE SIDE OF THE TRENCHES ON HIGHLY EROSION OR VERY STEEP SLOPES.
12. INSPECT THE STRAW ROLLS AND THE SLOPES AFTER SIGNIFICANT STORMS. MAKE SURE THE ROLLS ARE IN CONTACT WITH THE SOIL.
13. REPAIR ANY RILLS OR GULLIES PROMPTLY.
14. RESEED OR REPLANT VEGETATION IF NECESSARY UNTIL SLOPES ARE STABILIZED.



CONSTRUCTION ENTRANCE

NOT TO SCALE

CONSTRUCTION ENTRANCE NOTES:

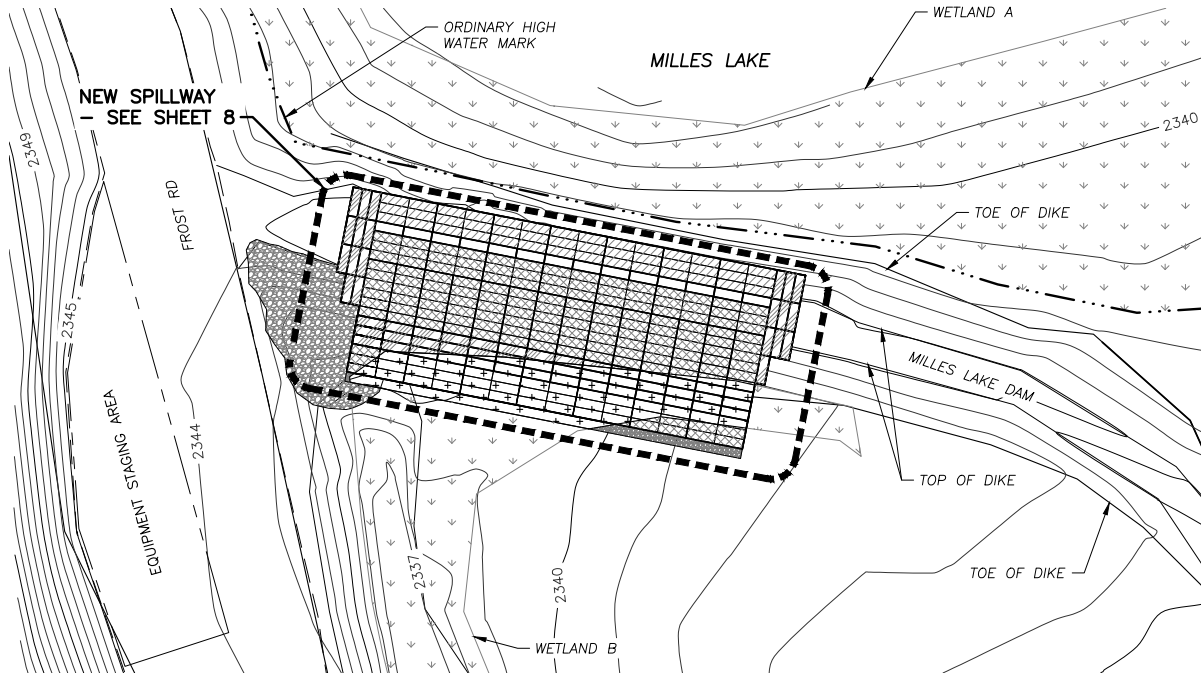
1. MATERIAL SHALL BE 4 INCH TO 8 INCH QUARRY SPALLS AND MAY BE TOP-DRESSED WITH 1 INCH TO 3 INCH ROCK. WSDOT 9-13.1 (5)
2. THE ROCK PAD SHALL BE AT LEAST 12 INCHES THICK AND 100 FEET LONG (50 FEET FOR SITES WITH LESS THAN 1 ACRE). WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA. SMALLER PADS MAY BE APPROVED FOR SINGLE-FAMILY RESIDENTIAL AND SMALL COMMERCIAL SITES.
3. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
4. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH A SILT FENCE.
5. INSTALL FABRIC UNDER QUARRY SPALLS AS DIRECTED BY ENGINEER

REFERENCE NUMBER: -----
 APPLICANT NAME:
 WASHINGTON DEPT. of FISH & WILDLIFE
 PROPOSED PROJECT:
 DAM SAFETY REPAIRS
 LOCATION: MILLES LAKE DAM
 SHEET 6 OF 9 DATE: 12/22/2021

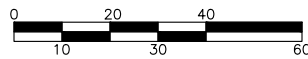


QUANTITIES								
MATERIAL	AREA	AREA OF IMPACT TO WETLAND	IMPERVIOUS SURFACE AREA	CUT OUTSIDE OF WETLAND	FILL OUTSIDE OF WETLAND	CUT IN WETLAND	FILL IN WETLAND	BELOW OHW
NATIVE MATERIAL	3612 SF	832.97 SF	-	155.69 CY	0	32.31 CY	0 CY	0 CY
ECOLOGY BLOCK	-	-	168 SF	0 CY	17.94 CY	0 CY	0 CY	0 CY
QUARRY SPALL IN GABION CAGE	756 SF	311.51 SF	-	0 CY	30.10 CY	0 CY	16.94 CY	0 CY
QUARRY SPALL IN GABION MATTRESS	2520 SF	414.36 SF	-	0 CY	123.15 CY	0 CY	10.27 CY	0 CY
QUARRY SPALL IN DISSIPATION PAD	168 SF	107.1 SF	-	0 CY	2.44 CY	0 CY	5.10 CY	0 CY
TOTALS	3612 SF	832.97 SF	168 SF	155.69 CY	155.69 CY	32.31 CY	32.31 CY	0 CY

NOTE: SOME AREAS OF MATERIALS MAY OVERLAP AND WILL NOT BE INCLUDED IN THE TOTAL



PROPOSED SITE PLAN

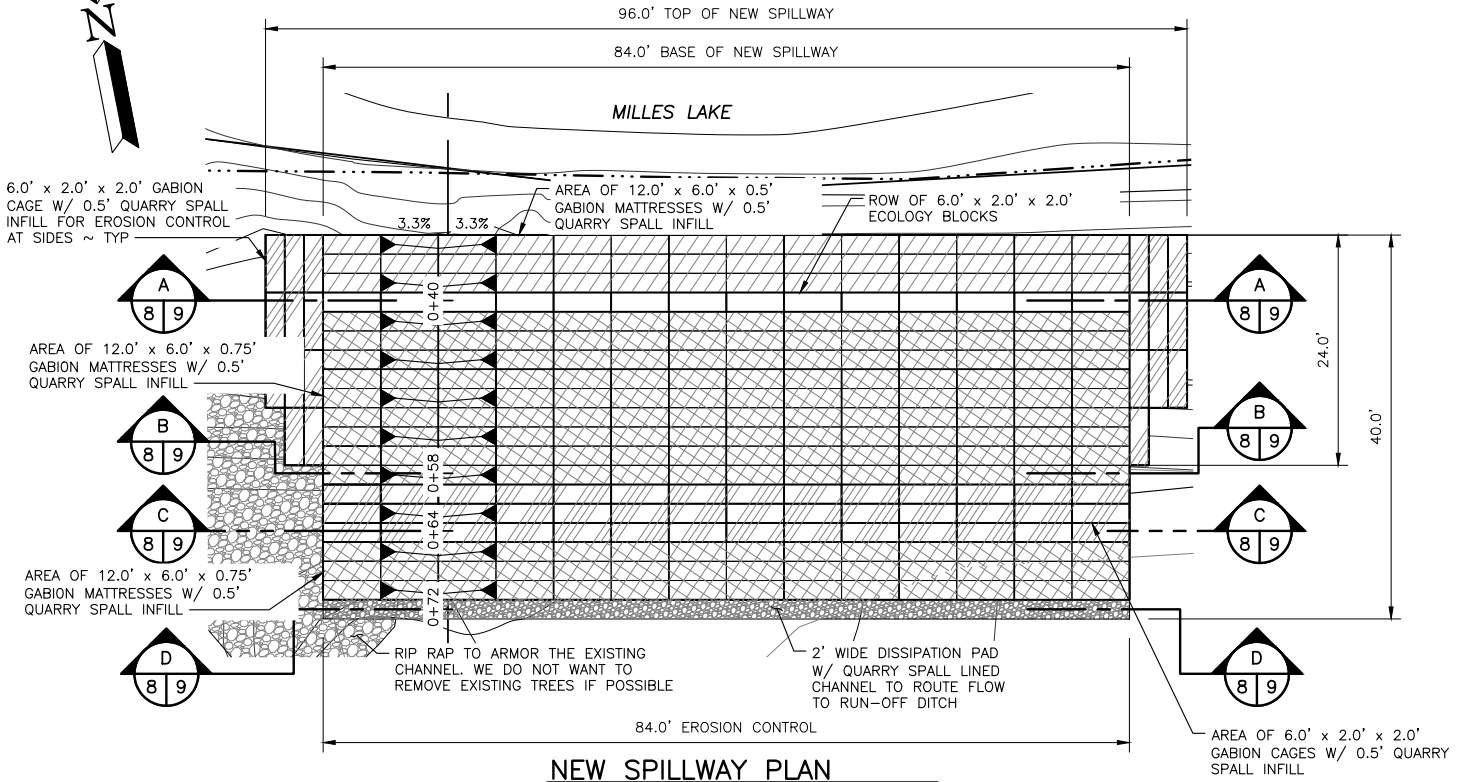


SCALE: 1" = 40'

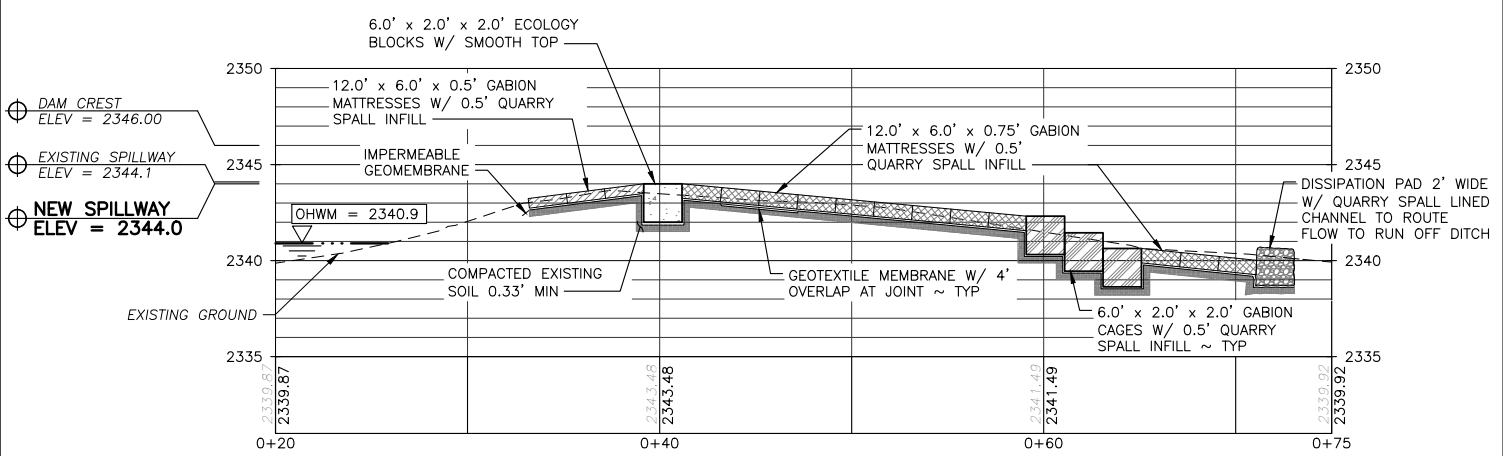
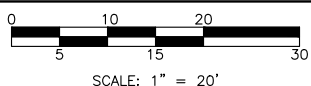
LEGEND

- GRAVEL ROAD
- ==== MAJOR CONTOUR LINES
- ===== MINOR CONTOUR LINES
- - - - - ORDINARY HIGH WATER
- WETLAND A BUFFER
- WETLAND B BUFFER
- [Hatched pattern] 12.0' x 6.0' x 0.5' GABION MATTRESS W/ 0.5' QUARRY SPALL
- [Cross-hatched pattern] 12.0' x 6.0' x 0.75' GABION MATTRESS W/ 0.5' QUARRY SPALL
- [Diagonal hatched pattern] 6.0' x 2.0' x 2.0' GABION CAGE W/ 0.5' QUARRY SPALL
- [Stippled pattern] 0.5' SIZED QUARRY SPALL (DEPTH VARIES 0.33' - 0.67')
- [Circular pattern] 0.5' SIZED RIP RAP (DEPTH VARIES 0.5' - 1.0')
- [+ + + + +] WETLAND OVERLAP
- [v v v v] WETLAND

REFERENCE NUMBER: -----
 APPLICANT NAME:
 WASHINGTON DEPT. of FISH & WILDLIFE
 PROPOSED PROJECT:
 DAM SAFETY REPAIRS
 LOCATION: MILLES LAKE DAM
 SHEET 7 OF 9 DATE: 12/22/2021



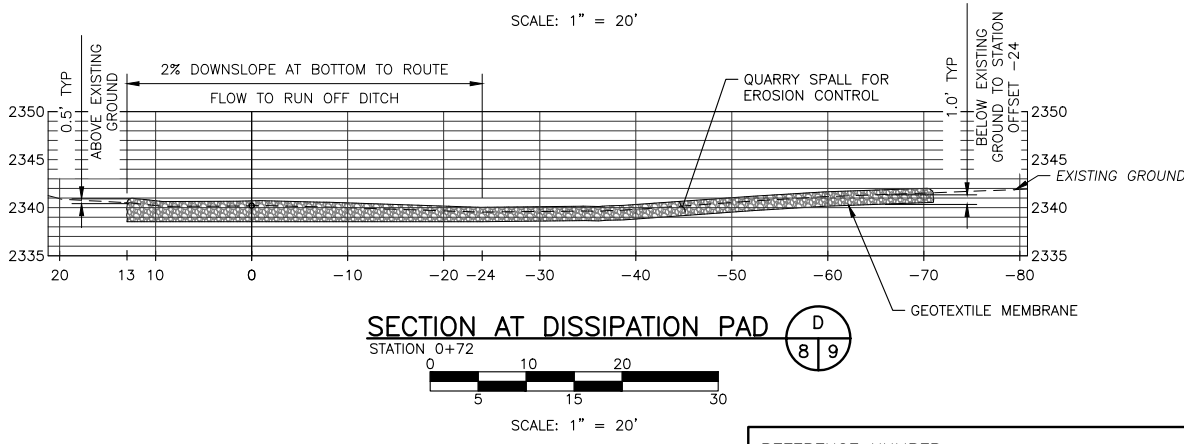
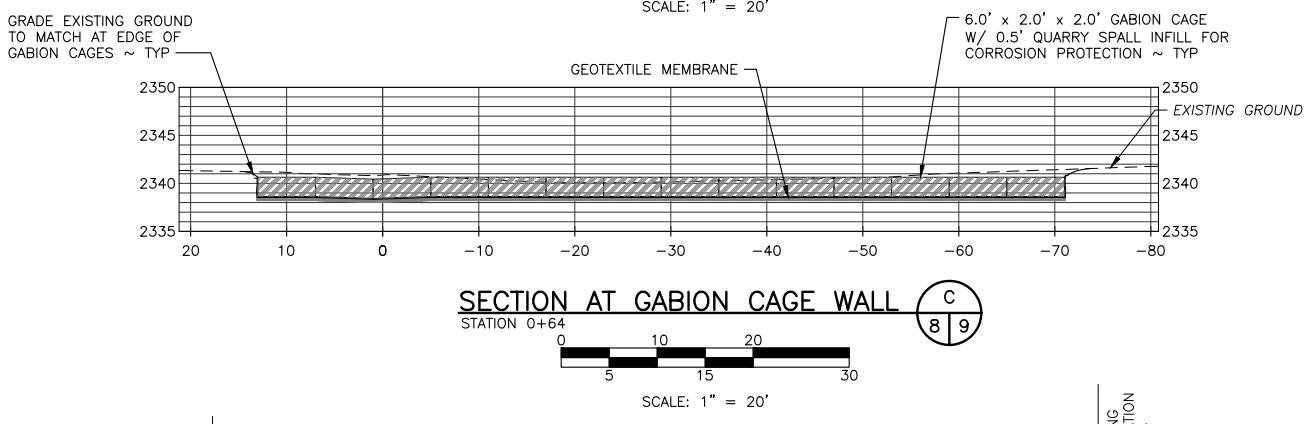
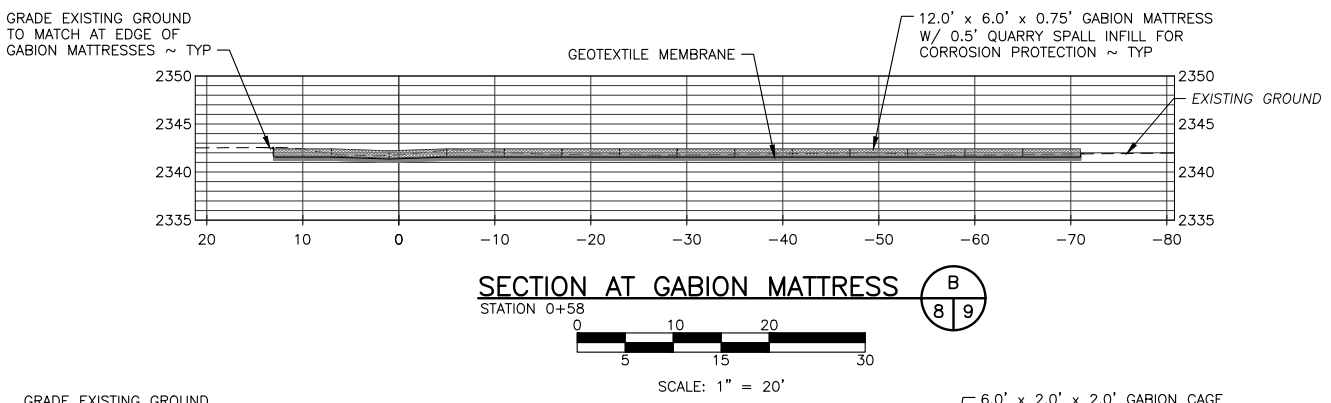
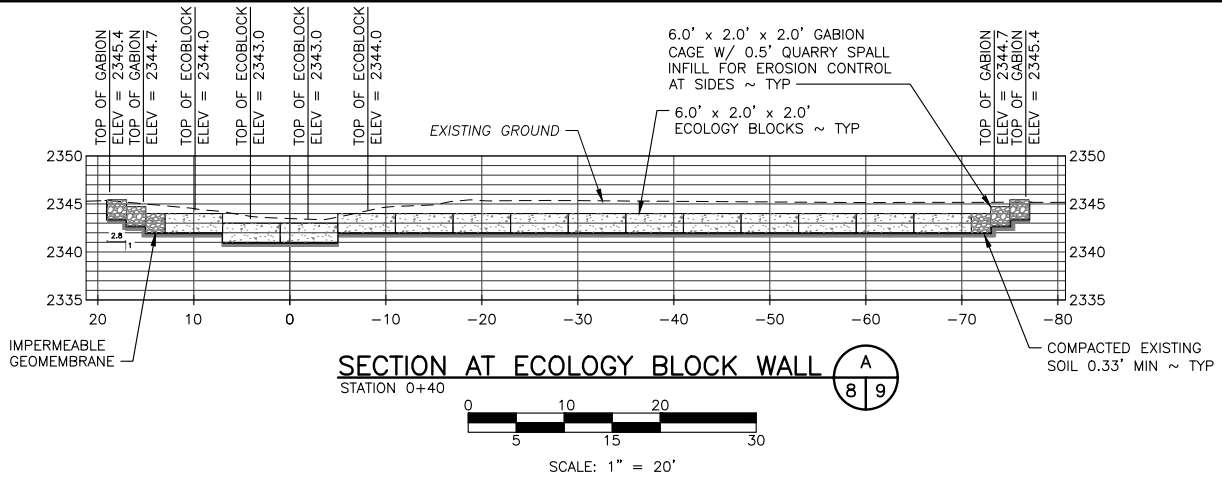
NEW SPILLWAY PLAN



SPILLWAY SIDE PROFILE



REFERENCE NUMBER: -----
 APPLICANT NAME:
 WASHINGTON DEPT. of FISH & WILDLIFE
 PROPOSED PROJECT:
 DAM SAFETY REPAIRS
 LOCATION: MILLES LAKE DAM
 SHEET 8 OF 9 DATE: 12/22/2021



REFERENCE NUMBER: -----
 APPLICANT NAME:
 WASHINGTON DEPT. of FISH & WILDLIFE
 PROPOSED PROJECT:
 DAM SAFETY REPAIRS
 LOCATION: MILLES LAKE DAM
 SHEET 9 OF 9 DATE: 12/22/2021